Case 3020

Megalotragus Van Hoepen, 1932 (Mammalia, Artiodactyla): proposed conservation, and Alcelaphus kattwinkeli Schwarz, 1932 (currently Megalotragus kattwinkeli): proposed conservation of the specific name

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Abstract. The purpose of this application is to conserve the generic name *Megalotragus* Van Hoepen, 1932, and the specific name of *Megalotragus kattwinkeli* (Schwarz, 1932). The generic name has been used consistently for a genus of very large African fossil antelopes (family BOVIDAE), dating from the Pliocene–late Pleistocene. The specific name of *M. kattwinkeli* refers to an East African species of the genus. The names are threatened by *Rhynotragus* and *R. semiticus*, both of Reck (1925), which until 1995 were believed to date from 1935 and, with the exception of a single use in 1997, have remained unused.

Keywords. Nomenclature; taxonomy; Mammalia; Artiodactyla; BOVIDAE; ALCELAPHINI; antelopes; Pliocene; Pleistocene; Africa; Megalotragus; Megalotragus priscus; Megalotragus kattwinkeli.

<sup>1.</sup> Until recently (see Gentry, Gentry & Mayr, 1995) the generic and specific names of Rhynotragus semiticus were thought to date from Reck (1935), when they were used for a new large Plio-Pleistocene antelope (family BOVIDAE) collected in 1913 from Olduvai Gorge, Tanzania by an expedition led by Dr Hans Reck of the Institut für Geologie und Paläontologie der Friedrich-Wilhelm Universität, Berlin (see Reck, 1914). Reck's paper of 1935 was written to provide diagnoses for his previously published references to this and another bovid. Rhynotragus semiticus had earlier been mentioned and illustrated in Reck (1933). However, the new antelope had already been established by Reck in a weekly general journal of news, fashion, arts and science published in Leipzig, the Illustrirte Zeitung, of 19 March 1925. The account contained a good quality line drawing of the only specimen, with the new generic and specific name in the caption. The accompanying text drew attention to the most distinctive feature of the illustrated specimen: 'Den einen characterisiert auf den ersten Blick das enorm hochgewölbte Gesichtsprofil ...'. Both the generic and specific names Rhynotragus semiticus are therefore available from Reck (1925, p. 451, fig.). Reck (1925, 1933, 1935) was unable to classify R. semiticus below family level. Schwarz (1937) regarded it as a distorted specimen of the living blue wildebeest. Connochaetes taurinus (Burchell, [1823]), a member of the tribe ALCELAPHINI.

- 2. The genus *Megalotragus* and species *M. eucornutus*, both of van Hoepen (1932, p. 63, fig. 1), were established for the horn cores of a large antelope (tribe ALCELAPHINI) from the Pleistocene at Cornelia, South Africa, specimen no. C667 in the National Museum, Bloemfontein (see Cooke, 1974, p. 76); *M. eucornutus* was later synonymised with *Bubalis priscus* Broom, 1909, a species founded on specimen SAM 1741 in the South African Museum, Cape Town, from the Modder River between Kimberley and Bloemfontein, and subsequently known by frontlets and horn cores from several South African sites (see Gentry & Gentry, 1978, p. 361).
- 3. Schwarz (1932, p. 4) named *Alcelaphus kattwinkeli* for fossil antelope material collected at Olduvai Gorge during the 1913 expedition (para. 1 above), and designated as holotype a right horn core with the adjacent part of the frontal bone, VI-1099 from an unknown stratigraphic horizon. It was housed in the Bayerischen Staatssammlung für Paläontologie und historische Geologie in Munich. Later Schwarz (1937) gave an expanded description of the species. His only illustration (Schwarz, 1937, pl. 1, fig. 3) showed a frontal region with horn bases, which the caption alleged to be specimen no. VII-468. However, in Schwarz's own list (1937, p. 56) of specimens, VII-468 was the number given to a lower jaw. Further, the skull part shown in pl. 1, fig. 3 did not fit the description of the holotype as a right horn core with frontal.
- 4. Wells (1959, p. 127; 1964, p. 91) was the first to suggest that the South African genus *Megalotragus* van Hoepen, 1932 might belong to the tribe ALCELAPHINI. Gentry & Gentry (1978, p. 356) placed *Alcelaphus kattwinkeli* Schwarz, 1932 in *Megalotragus*. Harris (1991) was able to establish that *Megalotragus* was congeneric with *Rhynotragus* Reck, 1925, and Gentry, Gentry & Mayr (1995, pp. 131–133, figs. 2, 3) that *R. semiticus* and *M. kattwinkeli* were conspecific. It follows that with recognition of the availability of *Rhynotragus* and *R. semiticus* from 1925 (para. 1 above), these names formally become the senior generic and specific synonyms for *Megalotragus* and *M. kattwinkeli*.
- 5. In addition to Olduvai Gorge, specimens of Megalotragus kattwinkeli have been found in material from the East African sites of Laetoli ('young Pleistocene' level), Peninj, Chesowanja, the Shungura Formation at Omo (see Gentry & Gentry, 1978, p. 361), and lately Vrba (1997) has recorded the species from the Middle Pleistocene at Awash. Harris (1991, p. 187, figs. 5.46–5.48) described a further species from Koobi Fora, M. isaaci, since synonymised with M. kattwinkeli by Vrba (1997, p. 148). The names Megalotragus and M. kattwinkeli have been widely used in the literature of South, East and North Africa (see, for example, Wells, 1959, 1964; Klein, 1972, 1994; Cooke, 1974; Vrba, 1977, 1979, 1984, 1985, 1995, 1997; Thackeray, 1980; Gentry, 1985; Brink, 1987; Geraads, 1987; Bonis, Geraads, Jaeger & Sen, 1988; Klein & Cruz-Uribe, 1991; Harris, 1991; Brain & Watson, 1992; Peters, Gautier, Brink & Haenen, 1994; McKee, 1995; Brink, de Bruiyn, Rademeyer & van der Westhuizen, 1995). It is undesirable to upset this currently stable position solely because of a hitherto overlooked report in a weekly journal of nearly 75 years ago and we propose that the names Megalotragus and M. kattwinkeli should be conserved. Until 1997 Rhynotragus and R. semiticus had not been used as valid names. On confirming the suspected synonymy between M. kattwinkeli and R. semiticus and recording the 1925 publication of Reck's names, we (Gentry, Gentry & Mayr, 1995, p. 133) stated that 'the International Commission on Zoological Nomenclature is being petitioned by A.W. and A. Gentry to conserve the usage of the familiar names Megalotragus and

- M. kattwinkeli'. Receipt of our application was announced in BZN 53: 145 (September 1996) and it was then noted that 'under Article 80 of the Code, existing usage is to be maintained until the ruling of the Commission is published'. Vrba (1997, p. 148) cited our (1995) publication and maintained the usage of Megalotragus and M. kattwinkeli. McKenna & Bell (1997, p. 449), however, adopted Rhynotragus as the senior name and included Megalotragus in synonymy. This adoption of Rhynotragus was contrary to Article 80 and under Article 79c there is a prima facie case for the conservation of both Megalotragus and M. kattwinkeli.
- 6. On study visits to the Bayerischen Staatssammlung für Paläontologie und historische Geologie in Munich in 1967 and 1969, we were assured that all Olduvai material formerly in the collections, aside from the holotype of the bovid Thaleroceros radiciformis Reck, 1925 and a few primates, had been destroyed by bombing in the Second World War during the night of 24-25 April 1944. By 1969 the surviving Olduvai material had all been unpacked and restored to the collections. Consequently, in our study (Gentry & Gentry, 1978) of the fossil Bovidae of Olduvai Gorge, we surmised (p. 356) that the figured specimen of Megalotragus kattwinkeli (Schwarz, 1932) could be VI-487, another listed skull part. Since the holotype had been destroyed and never figured, we designated a neotype. This was a damaged skull in the collections in the Natural History Museum, London, catalogue no. BMNH M21447, previously used as the holotype of Xenocephalus robustus Leakey, 1965 (p. 62, pls. 81–82), the generic and specific names of which we (Gentry & Gentry, 1978, p. 356) regarded as junior synonyms of Megalotragus and M. kattwinkeli. The generic name Xenocephalus is, in any case, preoccupied by the name for a fish (Kaup, 1858) and for a beetle (Wasmann, 1887), the beetle having been renamed Wasmannotherium by Bernhauer (1921).
- 7. On a further visit to Munich in 1992, one of us (A.W.G.) noticed that a cupboard in the storeroom for fossil mammals was labelled as containing the Reck collection. This was found to contain a great many bovid fossils of the 1913 Olduvai expedition, and among them the lost holotype of *Megalotragus kattwinkeli*. Dr Helmut Mayr, curator of fossil mammals in the Bayerischen Staatssammlung in Munich, informed us in 1994 that he had discovered the boxes containing the missing material in the basement of an outstation of the Universitäts-Institut near Munich in 1989. The most likely explanation for their survival is that shortly before the Second World War the material had been returned to Munich from being on loan to E. Schwarz. Schwarz had worked in London from 1933–1937, preparing his monograph of 1937 (see Hill, 1962), and had taken Olduvai material from Germany with him (see Gentry, Gentry & Mayr, 1995, for more details). For whatever reason, the material refound in 1989 had not been reincorporated into the collections during the War and hence had escaped destruction.
- 8. The label on the holotype horn core of *Megalotragus kattwinkeli* reads 'Or. No. VI-1099 + Typus *Alcelaplus kattwinkeli* Schwarz Oldoway O. Afrika Reck Smmlng. 1913'. The words 'Zoolog. Museum Berlin' printed on this label have been crossed out in pencil. It is indeed a right horn core, as indicated by Schwarz (1932), and also preserves part of the frontal with supraorbital pit and top of the orbit. Two other frontlets of *M. kattwinkeli* are included in this collection, numbered VI-487 and VI-1088, and neither is the specimen figured by Schwarz (1937, pl. 1, fig. 3) as VII-468 (see above). We can now only suppose that the illustration must be of the

fourth, unnumbered, 'Frontale mit Hornwurzel' of Schwarz's list. The holotype of *M. kattwinkeli*, specimen no. V1-1099, was described and photographed in our (1995) publication (Gentry, Gentry & Mayr, p. 132, fig. 2).

- 9. Under Article 75.8 of the proposed 4th Edition of the Code, due to come into effect on 1 January 2000, a rediscovered missing holotype is to resume the status of the name-bearing specimen. In our view the refound holotype of *Megalotragus kattwinkeli* is conspecific with the (1978) neotype skull. The London neotype is a more complete specimen of known stratigraphic provenance, but the Munich holotype is sufficient for species-level identification. It has a very considerable historical interest and it is fitting that its name-bearing status should be restored. Moreover, if at a future date our assertion of the conspecificity of neotype and holotype were challenged, and if the holotype were again the name bearer, then *kattwinkeli* would continue to be the name of the species which Schwarz had founded.
- 10. The International Commission on Zoological Nomenclature is accordingly asked:
  - (1) to use its plenary powers to suppress the following names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
    - (a) the generic name Rhynotragus Reck, 1925;
    - (b) the specific name *semiticus* Reck, 1925, as published in the binomen *Rhynotragus semiticus*;
  - (2) to place on the Official List of Generic Names in Zoology the name *Megalotragus* Van Hoepen, 1932 (gender: masculine), type species by monotypy *Megalotragus eucornutus* Van Hoepen, 1932 (a junior subjective synonym of *Bubalis priscus* Broom, 1909);
  - (3) to place on the Official List of Specific Names in Zoology the following names:
    - (a) kattwinkeli Schwarz, 1932, as published in the binomen Alcelaphus kattwinkeli and as defined by the holotype, specimen no. V1-1099 in the Bayerischen Staatssammlung für Paläontologie und historische Geologie in Munich;
      - (b) priscus Broom, 1909, as published in the binomen Bubalis priscus (senior subjective synonym of Megalotragus eucornutus Van Hoepen, 1932, the type species of Megalotragus Van Hoepen, 1932);
  - (4) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Rhynotragus* Reck, 1925, as suppressed in (1)(a) above;
  - (5) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *semiticus* Reck, 1925, as published in the binomen *Rhynotragus semiticus* and as suppressed in (1)(b) above.

## References

- Bernhauer, M. 1921. Zur Staphylinidenfauna von Südamerika. Deutsche Entomologische Zeitschrift, 1921(1): 65-77.
- Bonis, L. de, Geraads, D., Jaeger, J.-J. & Sen, S. 1988. Vertébrés du Pléistocène de Djibouti. Bulletin de la Société Géologique de France, (8)4: 323-334.
- Brain, C.K. & Watson, V. 1992. A guide to the Swartkrans early hominid cave site. *Annals of the Transvaal Museum*, 35: 343-365.
- Brink, J.S. 1987. The archaeozoology of Florisbad, Orange Free State. *Memoirs van die Nasionale Museum Bloemfontein*, 24: 1–151.

- Brink, J.S., Bruiyn, H. de, Rademeyer, L.B. & Westhuizen, W.A. van der. 1995. A new find of Megalotragus priscus (Alcelaphini, Bovidae) from the central Karoo, South Africa. Palaeontologia Africana, 32: 17-22.
- Broom, R. 1909. On a large extinct species of *Bubalis. Annals of the South African Museum*, 7: 279–280.
- Burchell, W.J. [1823]. Travels in the interior of southern Africa, vol. 2. 648 pp. Longman, Hurst, Rees, Orme, Brown & Green, London.
- Cooke, H.B.S. 1974. The fossil mammals of Cornelia, O.F.S., South Africa. *In Butzer*, K.W., Clark, J.D. & Cooke, H.B.S., The geology, archaeology and fossil mammals of the Cornelia Beds, O.F.S. *Memoirs van die Nasionale Museum, Bloemfontein*, 9: 63-84.
- Gentry, A.W. 1985. The Bovidae of the Omo group deposits, Ethiopia. Pp. 119–191 in: Les faunes Plio-Pléistocènes de la basse vallée de l'Omo (Ethiopie), vol. 1 (Perissodactyles Artiodactyles (Bovidae)). Cahiers de Paléontologie Travaux de Paléontologie est-africaine. Editions du CNRS, Paris.
- Gentry, A.W. & Gentry, A. 1978. Fossil Bovidae (Mammalia) of Olduvai Gorge, Tanzania. Bulletin of the British Museum (Natural History), Geology series, 29(4): 289–446; 30(1): 1–83.
- Gentry, A.W., Gentry, A. & Mayr, H. 1995. Rediscovery of fossil antelope holotypes (Mammalia, Bovidae) collected from Olduvai Gorge, Tanzania, in 1913. *Mitteilungen Bayerischen Staatssammhungen für Paläontologie und historische Geologie*, 35: 125–135.
- Geraads, D. 1987. La faune des dépôts Pléistocènes de l'ouest du lac Natron (Tanzanie); interprétation biostratigraphique. Sciences Géologiques, Bulletin, 40: 167-184.
- Harris, J.M. 1991. Koobi Fora Research Project, vol. 3, 384 pp. Clarendon Press, Oxford. Hill, W.C.O. 1962. Obitnary: Dr Ernst Schwarz, Nature, 194: 917.
- Kaup, J. 1858. Uebersicht der Familie Gadidae. Archiv für Naturgeschichte, 24(1): 85–93.
- Klein, R.G. 1972. The late Quaternary mammalian fauna of Nelson Bay Cave (Cape Province, South Africa); its implications for megafaunal extinctions and environmental and cultural change. *Quaternary Research*, 2: 135–142.
- Klein, R.G. 1994. The long-horned African buffalo (*Pelorovis antiquus*) is an extinct species. *Journal of Archaeological Science*, 21: 725–733.
- Klein, R.G. & Cruz-Uribe, K. 1991. The bovids from Elandsfontein, South Africa, and their implications for the age, palaeoenvironment, and origins of the site. *The African Archaeological Review*, 9: 21–79.
- Leakey, L.S.B. 1965. *Olduvai Gorge 1951–61*, vol. 1 (Fauna and background). 118 pp. University Press, Cambridge.
- McKee, J.K. 1995. Further chronological seriations of southern African Pliocene and Pleistocene mammalian faunal assemblages. *Palacontologia Africana*, 32: 11–16.
- McKenna, M.C. & Bell, S.K. 1997. Classification of mammals above the species level. xii, 631 pp. Columbia University Press, New York.
- Peters, J., Gautier, A., Brink, J.S. & Haenen, W. 1994. Late Quaternary extinction of ungulates in sub-saharan Africa: a reductionist's approach. *Journal of Archaeological Science*, 21: 17–28.
- Reck, H. 1914. Erste vorläufige Mitteilung über den Fund eines fossilen Menschenskelets aus Zentralafrika. Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin, 1914(3): 81–95.
- Reck, H. 1925. Aus der Vorzeit des innerafrikanischen Wildes. *Illustrirte Zeitung*, Leipzig, **164**: 451. (The article ends in the middle of a word, but no continuation of the text could be found in the same or the next two issues, or by reference to the index for the whole volume).
- Reck, H. 1933. Oldoway, die Schlucht des Urmenschens. 308 pp., 2 pls., 74 text-figs., map. Brockhaus, Leipzig.
- Reck, H. 1935. Neue Genera aus der Oldoway-Fauna. Zentralblatt für Mmeralogie, Geologie und Paläontologie, (B)1935(6): 215–218.
- Schwarz, E. 1932. Neue diluviale Antilopen aus Ostafrika. Zentralblatt für Mineralogie, Geologie und Paläontologie, (B)1932(1): 1-4.

- Schwarz, E. 1937. Die fossilen Antilopen von Oldoway. Wissenschaftliche Ergebnisse der Oldoway-Expedition 1913, N.F. 4: 8-104.
- Thackeray, J.F. 1980. New approaches in interpreting archaeological faunal assemblages with examples from southern Africa. South African Journal of Science, 76: 216–223.
- Van Hoepen, E.C.N. 1932. Voorlopige beskrywing van Vrystaatse soogdiere. *Paleontologiese Navorsing van die Nasionale Museum, Bloemfontein*, 2(5): 63–65.
- Vrba, E.S. 1977. New species of *Parmularius* Hopwood and *Damaliscus* Sclater & Thomas (Alcelaphini, Bovidae, Mammalia) from Makapansgat and comments on faunal chronological correlation. *Palaeontologia Africana*, 20: 137–151.
- Vrba, E.S. 1979. Phylogenetic analysis and classification of fossil and recent Alcelaphini Mammalia: Bovidae. *Biological Journal of the Linnean Society*, 11: 207–228.
- Vrba, E.S. 1984. Evolutionary pattern and process in the sister-group Alcelaphini-Aepycerotini (Mammalia-Bovidae). Pp. 62–79 in: Eldredge, N. & Stanley, S.M. (Eds.), Living fossils, Springer Verlag, New York.
- Vrba, E.S. 1985. African Bovidae: evolutionary events since the Miocene. South African Journal of Science, 81: 263-266.
- Vrba, E.S. 1995. The fossil record of African antelopes. Pp. 385–424 in Vrba, E.S., Denton, G.H., Partridge, T.C. & Burckle, L.H. (Eds.), Paleoclimate and evolution, with emphasis on human origins. 547 pp. Yale University Press, New Haven & London.
- Vrba, E.S. 1997. New fossils of Alcelaphini and Caprinae (Bovidae: Mammalia) from Awash, Ethiopia, and phylogenetic analysis of Alcelaphini. *Palaeontologia Africana*, 34: 127–198.
- Wasmann, E. 1887. Neue Brasilianische Staphyliniden. Deutsche Entomologische Zeitschrift, 31: 403-416.
- Wells, L.H. 1959. The Quaternary giant hartebeests of South Africa. South African Journal of Science, 55: 123-128.
- Wells, L.H. 1964. A large extinct antelope skull from the 'Younger Gravels' at Sydney-on-Vaal, C.P. South African Journal of Science, 60: 88-91.

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